

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DEREK EILERS

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Appeal No. 2003-0423  
Application No. 09/377,015

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ON BRIEF

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Before FRANKFORT, OWENS, and NASE, Administrative Patent Judges.  
OWENS, Administrative Patent Judge.

*DECISION ON APPEAL*

This appeal is from the final rejection of claims 1-29, which are all of the claims in the application.

*THE INVENTION*

The appellant claims a recloseable container, such as a battery pack, having an explosion prevention safety device comprised of a highly rigid panel with means for forming a pair

of outwardly swinging doors when the panel ruptures. Claim 22 is illustrative:

22. A recloseable container having walls defining an interior which, when said container is closed, is subjected to at least one of a first and a second pressure, said first pressure much lower than said second pressure, said container comprising:

a highly rigid integral panel at least partially forming one of the container walls, said panel having an interior surface exposed to said interior of said container, and an opposite, exterior surface, said panel having an unruptured state at said first pressure, said panel urged into a ruptured state in response to an increase in interior pressure from said first pressure to said second pressure; and

means for forming a pair of outwardly swinging doors in said panel as said panel is urged into its said ruptured state, said doors being open and attached to said panel in said ruptured state.

#### *THE REFERENCES*

Kinuta	6,180,279	Jan. 30, 2001 (filed Dec. 9, 1997)
Takada et al. (Takada)	6,210,825	Apr. 3, 2001 (\$ 102(e) date Aug. 12, 1998)

#### *THE REJECTIONS*

The claims stand rejected as follows: claims 1-21 and 23-29 under 35 U.S.C. § 112, first paragraph, written description requirement, and claim 22 under 35 U.S.C. § 103 as being unpatentable over Kinuta in view of Takada.

#### *OPINION*

We reverse the aforementioned rejections.

*Rejection under 35 U.S.C. § 112, first paragraph*

A specification complies with the 35 U.S.C. § 112, first paragraph, written description requirement if it conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention. See *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991); *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978); *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976).

The examiner argues that the appellant's originally-filed disclosure does not provide adequate written descriptive support for the highly rigid panel "being formed of a single material layer" as recited in claims 1 and 23.<sup>1</sup> The appellant argues that the appellant's figure 4, which is a greatly enlarged cross sectional view (specification, page 4, line 11) and has cross hatching lines extending from exterior surface 36 to interior surface 38 of panel 34, shows that panel 34 is a single material layer (brief, page 8). In response, the examiner argues that

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<sup>1</sup> This limitation was added (amendment filed August 22, 2001, paper no. 7) in response to the examiner's rejection under 35 U.S.C. § 103 over Kinuta in view of Takada (office action mailed June 12, 2001, paper no. 6).

Kinuta's safety device 1 is described (col. 3, lines 16-24) and shown (figure 2D) as having two layers, but is shown in figure 4A with cross hatching which extends from one surface to the opposite surface (answer, pages 3-4). Thus, the examiner argues, Kinuta indicates that cross hatching extending from one surface to the opposite surface of a layer may be used to illustrate multiple layers (answer, page 4).

Kinuta's figure 4A, which shows cross hatching extending from one surface to the opposite surface of the explosion prevention safety device, is an overall view of the explosion prevention safety device and the battery casing (col. 3, lines 3-5). When the explosion prevention safety device itself is shown in an enlarged view in figure 2D, what is shown by surface-to-surface cross hatching in figure 4A appears as two layers (11 and 13). Kinuta, therefore, indicates that if the appellant's highly rigid panel has more than one layer, the multiple layers should be visible in a greatly enlarged cross-sectional view of the highly rigid panel.

The appellant's figure 4, however, which provides such a greatly enlarged cross-sectional view (specification, page 4, line 11), shows, by surface-to-surface cross hatching, that the highly rigid panel is a single layer. Moreover, the appellant's

specification discloses (page 5, lines 17-19): "Cover 14 is machined, stamped or otherwise formed from a material such as, for example, Al6061-T6 aluminum, as case 12 may be. It is envisioned that cover 14 may alternatively be formed of a suitable, injection molded polymer." These teachings that the cover, which includes the highly rigid panel (specification, page 5, lines 21-26), is formed from "a material" or "a suitable, injection molded polymer," indicate that the highly rigid panel is formed from single material.

The examiner, therefore, has not carried the burden of establishing that the appellant's originally-filed disclosure would have failed to convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of a highly rigid panel formed of a single material layer as required by the appellant's independent claims 1 and 23, and claims which depend therefrom. Accordingly, we reverse the rejection under 35 U.S.C. § 112, first paragraph.

*Rejection under 35 U.S.C. § 103*

The appellant's claim 22 requires "means for forming a pair of outwardly swinging doors in said panel as said panel is urged into its said ruptured state, said doors being open and attached to said panel in said ruptured state."

The portion of Kinuta relied upon by the examiner for this claim requirement is figure 5B (office action mailed June 12, 2001, paper no. 6, pages 3-4). The examiner argues that "[t]he annular groove (as shown in Fig. 5B) is a means for forming a pair of outwardly swinging doors (clm 22). When the safety valve is ruptured along the third segment [i.e., groove 2 having thin floor 3], the two portions on either side of the third segment will be blown outwards (swinging doors)" (office action mailed June 12, 2001, paper no. 6, page 4).

The examiner's argument that the portions on either side of the groove in figure 5B are blown outwards when the safety valve ruptures along the groove is mere speculation. Kinuta's only discussions of this figure are the following:

FIG. 5B is a plan view of an explosion prevention safety device with yet another safety valve groove configuration. [col. 3, lines 9-10]

\* \* \*

Instead, the groove **2** may also have a non-closed configuration such as the shapes shown in FIG. **5**. [col. 4, lines 53-55]

Moreover, the examiner's argument appears to be inconsistent with Kinuta's discussion regarding another embodiment. In that embodiment, an explosion prevention safety device composed of a thin metal floor (3) having a second metal layer (13) thereon has a portion removed from the second metal layer so as to form a

circular groove (2) composed only of the thin metal floor  
(figure 2D; col. 4, lines 30-35). Kinuta teaches that

when the pressure in the battery casing rises to the prescribed level, the safety valve functions by blowing along the floor of the groove which, being thinner, is weakened, releasing the gas in the casing preventing the battery from exploding and thereby also preventing collateral damage to surrounding equipment from such an explosion [col. 4, lines 44-49].

Kinuta indicates that the plug within the circular groove (figure 1A) blows out when the battery explodes, but Kinuta does not teach that the portion of the explosion prevention safety device outside the groove, which is composed of both the thin metal floor and the second metal layer, is deformed when the battery explodes. Kinuta's discussion of this embodiment does not indicate that in the embodiment shown in figure 5B relied upon by the examiner, the portion of the explosion prevention safety device outside the groove, which likewise is composed of a thin metal floor and a second metal layer, is deformed when the battery explodes. If anything, Kinuta indicates that the groove in figure 5B, which is shown as being comparable in size to the circular groove and portion therein in the other embodiment (figure 1A), is sufficiently large to relieve the pressure in the battery when it explodes, without any deformation of the metal surrounding the groove.

The examiner argues that the thicknesses of the appellant's exemplified panel and groove are, respectively, 0.032" (813  $\mu\text{m}$ ) and 0.009" (229  $\mu\text{m}$ ), which is a ratio of 3.6 (specification, page 7, lines 9-11), whereas the thicknesses of Kinuta's exemplified panel and groove are, respectively, 50 $\mu\text{m}$  and 10-20  $\mu\text{m}$ , which is a ratio of 2.5 to 5 (answer, pages 5-6). This comparison, the examiner argues, indicates that Kinuta provides a means for forming outwardly swinging doors. See *id.* This argument is not well taken because the examiner has not established that the capability of forming swinging doors depends solely on the relative thickness of the panel and groove, rather than also depending on other factors such as the width of the groove and the material of construction of the panel.

The examiner argues that "the device does not have to blow anywhere but along floor 3 to form a pair of outwardly swinging doors. Specifically, the part of the device adjacent to each side of the groove provides a means of bending outwards to form the 'swinging doors'" (answer, page 5). The examiner, however, has not established that the pressure in the exploding battery is

not relieved by Kinuta's groove before the metal surrounding the groove can bend outward to form swinging doors.

The examiner's arguments require that the portions of the explosion prevention safety device in Kinuta's figure 5B outside the groove inherently are capable of bending outward and forming swinging doors when the battery explodes. The grooves in Kinuta's figures 5A and 5B may have the shown configurations, rather than having a large rectangular configuration, for the same reason that the appellant's grooves have their particular shape, i.e., to provide strength during normal operation while providing a large, generally-rectangular opening for gas release by outward bending of the portions surrounding the grooves when the battery explodes (specification, page 2, lines 16-23 and page 7, lines 11-14). As indicated by the above discussion of Kinuta, however, this is not a disclosed capability of Kinuta's explosion prevention safety device. Hence, it is merely a possibility. An inherent characteristic must be inevitable, and not merely a possibility or probability. See *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981).

The examiner relies upon Takada only for a suggestion to use Kinuta's explosion prevention safety device on a recloseable container (office action mailed June 12, 2001, paper no. 6,

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pages 4-5), and not for any teaching which remedies the above-discussed deficiency in Kinuta.

For the above reasons we conclude that the examiner has not carried the burden of establishing a *prima facie* case of obviousness of the appellant's claimed invention.

*DECISION*

The rejections of claims 1-21 and 23-29 under 35 U.S.C. § 112, first paragraph, written description requirement, and claim 22 under 35 U.S.C. § 103 over Kinuta in view of Takada, are reversed.

*REVERSED*

Charles E. Frankfort	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
Terry J. Owens	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
Jeffrey V. Nase	)	
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